- - Q1 A)

CREATE TABLE member (

memb\_no INT PRIMARY KEY,

name VARCHAR(50) NOT NULL);

CREATE TABLE book (

isbn VARCHAR(20) PRIMARY KEY,

title VARCHAR(100) NOT NULL,

authors VARCHAR(100) NOT NULL,

publisher VARCHAR(100) NOT NULL);

CREATE TABLE borrowed (

memb\_no INT,

isbn VARCHAR(20),

date DATE NOT NULL,

PRIMARY KEY (memb\_no, isbn, date),

FOREIGN KEY (memb\_no) REFERENCES member(memb\_no),

FOREIGN KEY (isbn) REFERENCES book(isbn));

- - Q1 B)

- - B)-a

SELECT DISTINCT m.memb\_no, m.name

FROM member m, borrowed b, book bk

WHERE m.memb\_no = b.memb\_no

AND b.isbn = bk.isbn

AND bk.publisher = 'McGraw-Hill';

- - B)-b

SELECT m.memb\_no, m.name

FROM member m

WHERE NOT EXISTS

(SELECT bk.isbn FROM book bk WHERE bk.publisher = 'McGraw-Hill'

EXCEPT

SELECT b.isbn FROM borrowed b WHERE b.memb\_no =m.memb\_no);

- - B)-c

SELECT bk.publisher, m.memb\_no, m.name

FROM member m, borrowed b, book bk

WHERE m.memb\_no = b.memb\_no

AND b.isbn = bk.isbn

GROUP BY bk.publisher, m.memb\_no, m.name HAVING COUNT(\*) > 5;

- - B)-d

SELECT AVG (coalesce(book\_count,0))

FROM (SELECT m.memb\_no, COUNT(b.isbn) as book\_count

FROM member m LEFT JOIN borrowed b ON m.memb\_no =b.memb\_no

GROUP BY m.memb\_no) ;

- - Q2 A)

SELECT day, qty, SUM(qty) OVER (order by day) AS cumQty

FROM demand;

- - Q2 B)

WITH ranked\_days AS (

SELECT product, day, qty,

ROW\_NUMBER() OVER (PARTITION BY product ORDER BY qty) AS rn

FROM demand)

SELECT product, day, qty, rn

FROM ranked\_days

WHERE rn <= 2;